
On stem cells, sports injuries and aging

Posted: May 24, 2011

Created: 24/05/2011 - 14:56

A headline today grabbed my attention: Can your own stem cells heal your running injuries?

The answer, in a word: Duh.

That's the whole point of tissue-specific stem cells like the ones lurking in muscles. These are the body's reservoir for repairing and rebuilding tissues. In fact, several CIRM grantees are studying what makes muscle stem cells tick, and what make them tick less effectively as we age. A bit of shameless self-promotion, but here's a story by yours truly from the Stanford School of Medicine magazine about work by Tom Rando, who was studying signals that direct muscle stem cells to heal injuries. His post-doctoral student Irina Conboy went on to found her own lab at the University of California, Berkeley, where she got a New Faculty Award to continue the work (we've blogged about her work here).

I suppose what's implied in the headline isn't whether stem cells normally heal injuries, which they do, but whether they can be used medically to heal injuries more effectively as in the case of the baseball pitcher Bartolo Colon.

To date, CIRM isn't funding work relating directly to, say, shin splints or plantar fasciitis. But a number of grantees are studying not only muscle stem cells but also another type of stem cell called a mesenchymal stem cell that seems to be able to repair bone and cartilage. (Here's a list of all CIRM awards targeting bone, muscle or cartilage.) What's exciting about a lot of the basic stem science going on today is that it could lead to new ways of treating a wide range of different injuries, either by injecting a person's own stem cells or by helping the native stem cells heal more effectively.

As a runner who is inevitably aging, I think it's good news that research into chronic, debilitating conditions such as osteoarthritis could also provide some benefit down the road to my own damaged joints.

A.A.

Tags: aging, injury, muscle

Source URL: <https://www.cirm.ca.gov/blog/05242011/stem-cells-sports-injuries-and-aging>